



Chronic Heart Failure

Palo Alto, CA

QUERI Fact Sheet

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QUERI currently focuses on ten conditions that are prevalent and high-risk among veteran patients: chronic heart failure, colorectal cancer, diabetes, HIV/ AIDS, ischemic heart disease, mental health, polytrauma and blast-related injuries, spinal cord injury, stroke, and substance use disorders.

Chronic Heart Failure

Chronic heart failure (CHF) is associated with a high mortality and poor quality of life. Chronic heart failure currently affects nearly 5 million Americans, and hospital admissions for this condition have increased six-fold in the United States since 1970 (from 80,000 per year to more than 500,000 in 2002) due, in part, to an aging population. Moreover, CHF is the number one reason for discharge for veterans treated within the VA health care system

Therapies for this chronic condition, such as angiotensin converting enzyme (ACE) inhibitors, beta-blockers, aldosterone antagonists, and implantable cardioverter-defibrillators (ICDs), are available but are often under-used. And although guideline compliance for some treatments (ACE inhibitors) is likely to be near goal within the VA, vulnerable populations and those with comorbidities are likely to be under-treated. Thus, chronic heart failure care is an ideal candidate for the QUERI program.

Chronic Heart Failure Quality Enhancement Research Initiative

The Chronic Heart Failure Quality Enhancement Research Initiative (CHF-QUERI) utilizes the QUERI 6-step process (see back page) to improve the quality of care and health outcomes of veterans with CHF. Three goals have been identified for CHF-QUERI:

- Increasing the use of life-prolonging treatment,
- Preventing and identifying unrecognized heart failure, and
- Reducing hospitalizations through patient-centered care coordination.

CHF-QUERI Projects and Findings

Use of Life-Prolonging Therapies: Data on beta-blockers has been collected but not analyzed, thus CHF-QUERI's first project will be to determine the use of beta-blockers in the VA system. Another project will focus on analyzing data from VA's External Peer Review Program to determine the number of candidates for aldosterone antagonist use, defibrillators, and cardiac resynchronization therapy. If these medications and devices are found to be under-used, then relevant performance measures to optimize their use will be developed.

Appropriate Use of ICDs: Defibrillators deserve special attention given their high

cost and benefit. Several cost-effectiveness studies have estimated that ICD use is economically attractive for heart failure patients that qualified for randomized trials. However, the cost-effectiveness in specific sub-groups is poorly defined. CHF-QUERI is examining the current use of ICDs in the VA system and will determine the cost of care and the utility (frequency of discharges), with the goal of identifying sub-groups where ICDs can be targeted or avoided. In addition, each VA site will be surveyed to determine capacity for device placement. The disparity between the supply and demand for devices will be determined.

Heart Failure Registries: An important mechanism for identifying patients in need of treatment optimization is through registries. The goal of this project is to both improve guideline-recommended care and decrease hospitalization rates. Pilot registries will be created at each VA station through the use of local VA data, and health

The CHF-QUERI Executive Committee

Each QUERI Executive Committee is co-chaired by a research expert and a clinician. The research coordinator for CHF-QUERI is **Paul Heidenreich, MD**; the clinical coordinator is **Barry Massie, MD**. This Executive Committee includes other experts in the field of chronic heart failure including: Anita Deswal, MD; Mark Dunlap, MD; Gregg Fonarow, MD; Elaine Furmaga, Pharm D; Wendy Gattis-Stough, PharmD; Peter Groeneveld, MD, MPH; Robert L. Jesse, MD, PhD; Harlan Krumholz, MD, MPH; John Rumsfeld, MD, PhD; **Anju Sahay, PhD** (Implementation Research Coordinator); Martha Shively, RN, PhD; and John Spertus, MD, MPH.

status will be documented through surveys in selected patients. Those patients found to have very poor health status – and those not on optimal treatment – will be identified for interventions that may include physician feedback, referral to cardiology clinic, disease management programs, and/or device placement. A national registry also will be created using administrative data, pharmacy data, laboratory data, and quality of care data.

Identification of unrecognized heart failure: CHF-QUERI will pilot test a screening program of limited echocardiography and marker testing in high-risk populations (e.g., veterans with diabetes and ischemic heart disease), and those with symptoms of heart failure that have been attributed to lung disease without a cardiac evaluation. The goal is to identify candidates for treatments (i.e., ACE inhibitors, beta-blockers) that are recommended to reduce the development and progression of heart failure.

Clinical Reminders: The reminder system incorporated into the computerized medical record (CPRS) has the potential to improve care for heart failure but is limited because the left ventricular ejection fraction (EF) is not available in electronic form. CHF-QUERI is working with VA's Patient Care Services and the Office of Information to identify a mechanism that will allow this information to be available through CPRS. CHF-QUERI also is testing a clinical reminder attached to the echocardiography report (where EF data is available). Initial data for ACE inhibitor and beta-blocker reminders are promising.

Collaboration with Other VA organizations: CHF-QUERI has ongoing projects with Ischemic Heart Disease QUERI, and also is collaborating with VA's Office of Quality and Performance, Pharmacy Benefits Management, and Patient Care Services, including the Office of Care Coordination, to both understand and improve the care for veterans with chronic heart failure.

Additional CHF-QUERI Projects

There are several projects conducted by CHF-QUERI affiliates, such as developing a database that will identify a CHF clinician at each facility. These providers then will be asked to complete a survey to determine current needs for optimal CHF care. In addition, a database will be developed that highlights research projects on heart failure involving VA investigators. Large non-VA trials also will be tracked and made available on a CHF-QUERI website.

THE QUERI PROCESS

The QUERI process includes six steps:

- 1) identify high-risk/high volume diseases or problems;
- 2) identify best practices;
- 3) define existing practice patterns and outcomes across VA and current variation from best practices;
- 4) identify and implement interventions to promote best practices;
- 5) document that best practices improve outcomes; and
- 6) document that outcomes are associated with improved health-related quality of life.

Contact information CHF-QUERI:

Theresa Marsh, BS
CHF QUERI
Administrative Coordinator
Tel: (415) 221-4810 x 3820
Fax: (415) 933-6510
E-mail: theresa.marsh@va.gov

Contact for General Information:

Linda McIvor, MHS
QUERI Program Manager,
Health Services Research and
Development Service
Tel: 202/254-0230
E-mail: linda.mcivor@va.gov

VA's Research and Development QUERI Website: www.hsrdr.research.va.gov/queri
CHF-QUERI direct weblink: www.hsrdr.houston.med.va.gov/chfqueri